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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,829	04/18/2005	Jean-Ho Song	21C-0191	2222
23413 7590 07/09/2009 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER NGUYEN, DUNG T				
ART UNIT 2871		PAPER NUMBER		
NOTIFICATION DATE 07/09/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

Office Action Summary

Application No.

10/531,829

Applicant(s)

SONG ET AL.

Examiner

Dung Nguyen

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2009.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
4a) Of the above claim(s) 15-22 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-14 and 23-29 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/23/2009 has been entered.

Applicant's amendment dated 03/29/2009 has been received and entered. Claims 1-14, 23-29 are pending in the application. Claims 15-22 stand withdrawn from consideration as non-elected claims

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-14 and 23-29 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's submitted prior art, Kim et al. , WO 01/45283, in view of Kikkawa et al., US 6,879,359, as stated in the previous final office action.

Regarding the above claims, Kim et al. disclose a liquid crystal display (LCD) device (figures 4-6) comprising:

. a first substrate (11) having a plurality of unit cells (figure 6), each cell including a sensor thin film transistor (TFT) (12), a storage device (14/15/16) and a first switch TFT (13), a

second insulating layer (see figure 5). It is noted that a data reading part and a first gate driving part (fingerprint reading section 100 and control section 400) inherently formed over the first substrate to function/control the sensor TFT and the switch TFT;

- . an LCD panel (3) inherently having a second substrate and a liquid crystal layer attaching to the first substrate (figure 4);
- . a sensor output signal line (output $n/n+1$);
- . a light shielding layer (13-sh)

Kim et al. do not explicitly disclose the LCD panel having first transparent electrode, a second substrate having a second transparent electrode, a color filter and a second switch TFT, wherein the first transparent electrode is in contact with a lower surface of the first substrate and the liquid crystal layer contacts the first transparent electrode. Kikkawa et al. do disclose an LCD (figure 3) having first transparent electrode (34), a second substrate (21) having a second transparent electrode (31), a color filter (30) and a second switch TFT (22/26/27), a first insulating layer (32) between the second transparent electrode (31) and the color filter (30). In addition, a data driver part and a second gate driver part (control section 400) would be formed over the second substrate to control the switch TFT. Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to combine the Kikkawa et al. LCD panel into the Kim et al. fingerprint terminal in order to obtain an LCD device having both a data display function and a fingerprint capture function. In addition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the Kim et al. substrate (11) with the Kikkawa et al. substrate (35) together, since it has been held that making an old device portable without producing any new and unexpected result involves only routine in

the art. In re Lindberg, 93 USPQ 23 (CCPA 1952); as a result, the first transparent electrode (34) would be in contact with a lower surface of the first substrate (the combination of Kim's substrate 11 and Kikkawa's substrate 35) and the liquid crystal layer (33) would contact the first transparent electrode (34) as claimed.

Response to Arguments

3. Applicant's arguments filed 03/29/2009 have been fully considered but they are not persuasive.

. Applicant's arguments, regarding claim 1, 10 and 23, are as follow:

a. Kim does not teach or suggest a first substrate including a plurality of unit cells and a first transparent electrode, the first transparent electrode making contact with the lower surface of the first substrate, the lower surface opposing a surface including the unit cells, and the liquid crystal layer contacts the first transparent electrode disposed on the lower surface of the first substrate of amended independent claims 1, 10 and 23. In addition, Kikkawa also *does not teach or suggest* a first substrate including a plurality of unit cells and a first transparent electrode, the first transparent electrode making contact with the lower surface of the first substrate, the lower surface opposing a surface including the unit cells, and the liquid crystal layer contacts the first transparent electrode disposed on the lower surface of the first substrate of amended independent claims 1, 10 and 23, and does not remedy the deficiencies of Kim.

b. Since the combination of teachings of Kim and Kikkawa would lead one of ordinary skill in the art to include three substrates, contrary to the present invention as described, claimed and illustrated, there exists *no suggestion or motivation in the references or to one of ordinary*

skill in the art to modify or combine Kim and Kikkawa to teach a liquid crystal layer interposed between the first and second substrates, the liquid crystal layer contacting the first transparent electrode disposed on the lower surface of the first substrate.

c. Since Kikkawa specifically teaches an LCD (for example, Figure 3) including a liquid crystal layer 33 is held between a TFT substrate 60 including a first transparent substrate 21 and an opposite substrate 61 including a second transparent substrate 35, if the fingerprint reader 10 including lower substrate 11 of Kim (for example, Figure 5) were then combined with the LCD of Kikkawa, the liquid crystal layer 33 would still only contact the (upper) second transparent substrate 35 of Kikkawa, not the lower substrate 11 (as the "first substrate") of the fingerprint reader 10 of Kim. Therefore, merely combining the LC panel 3 of Kim with the LCD of Kikkawa *does not teach* the claimed invention.

d. Applicants find *no teaching, suggestion or motivation* in Kim and Kikkawa to omit either the lower substrate of the fingerprint reader 10 of Kim or of the upper substrate of the LCD of Kikkawa. Applicants further submit that neither Kim nor Kikkawa as a whole provide a reason for one of ordinary skill in the art to further modify Kim and Kikkawa by omitting one of the lower substrate of the fingerprint reader 10 of Kim or of the upper substrate of the LCD of Kikkawa, such that the liquid crystal layer 33 of Kikkawa contacts "a first substrate including a sensor thin film transistor and a first switch thin film transistor" as claimed

e. Applicants again respectfully submit that *there is no teaching, suggestion or motivation* in Kim and Kikkawa to omit either the lower substrate of the fingerprint reader 10 of Kim or of the upper substrate of the LCD of Kikkawa, and neither Kim nor Kikkawa as a whole provide a reason for one of ordinary skill in the art to further modify Kim and Kikkawa by omitting one of

the lower substrate of the fingerprint reader 10 of Kim or of the upper substrate of the LCD of Kikkawa as required such that the liquid crystal layer 33 of Kikkawa contacts "a first substrate including a sensor thin film transistor and a first switch thin film transistor" as claimed. Since there is *no teaching, suggestion or motivation* in Kim and Kikkawa to further modify the combined structure of Kim and Kikkawa to teach a liquid crystal layer interposed between the first and second substrates, the liquid crystal layer contacting the first transparent electrode disposed on the lower surface of the first substrate of Claims 1, 10 and 23, there exists *no suggestion or motivation* to one of ordinary skilled in the art to remove one of the lower substrate of the fingerprint reader 10 of Kim or of the upper substrate of the LCD of Kikkawa, to teach the claimed invention, and therefore the claimed invention is nonobviousness.

f. Applicants respectfully submit that the Examiner has used an improper standard in arriving at the rejection of the above claims under section 103, based on improper hindsight, which fails to consider the totality of Applicant's invention and to the totality of the cited references, Kim and Kikkawa and the Examiner has used Applicant's disclosure to select portions of the cited references to allegedly arrive at Applicant's invention. In doing so, the Examiner has failed to consider the teachings of the references or Applicant's invention as a whole in contravention of section 103, including the disclosures of the references which teach contrary to Applicant's invention. Thus, since the rejection details fail to point out with specificity what features in the cited references are being cited as corresponding to or teaching limitations of the claimed invention, since Kim and Kikkawa, alone or in combination, *fail to teach or suggest all of the limitations of* at least amended Claims 1, 10 and 23, since the combination of teachings of Kim and Kikkawa would lead one of ordinary skill in the art to

include three substrates, contrary to the present invention as described, claimed and illustrated, since combining the LC panel 3 of Kim with the LCD of Kikkawa *does not teach* the claimed invention.

. The Examiner's responses are as follow:

a. The Examiner agrees that each of references Kim et al. or Kikkawa et al. alone does not teach all limitations as claimed. However, Kim et al. do teach an LCD device comprising a unit cells with a lower substrate 11 and the liquid crystal display panel 3 (see figure 4) and Kikkawa et al. do teach a liquid crystal display panel with a first transparent electrode 34 contacts a substrate 35; and thus, the combination of Kim et al and Kikkawa et al., as stated above, would combine such Kim et al. liquid crystal display panel 3 with the Kikkawa et al panel and both Kim et al. substrate 11 and Kikkawa et al substrate 35 would be made to one to make a portable device (i.e., compact display device). *In re Lindberg, 93 USPQ 23 (CCPA 1952)*. Therefore, the liquid crystal display panel 3 is directly attached to the finger print reader 10 as well and the liquid crystal layer would be contacts the first transparent electrode that disposed on the lower surface of the first substrate (combination of Kim's substrate 11 and Kikkawa's substrate 35).

b. In response to applicant's argument that there is no motivation, no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re*

Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as stated above and in part a, the combination of Kim et al. and Kikkawa et al. would result a claimed invention and would improve a size of a device (e.g., compact size).

c. as explained in part a., the Kikkawa et al. upper substrate can be directly attached to the lower substrate of the fingerprint reader and it can be formed together for a compact display device purposes. Therefore, merely combining the liquid crystal display panel 3 of Kim with the Kikkawa et al. display would result the claimed invention as claimed as well.

d. The Examiner respectfully disagrees with Applicant's viewpoint since the combination of Kim et al. and Kikkawa et al. could be combined to have less than three substrates, since the Kim's substrate 11 and the Kikkawa et al. substrate 35 would be combined to one for making a portable device.

e. as noted in c and d., the combination of Kim and Kikkawa et al. would be proper and does disclose all the limitations of the claimed invention.

f. as noted in the above rejection and all parts a-d, one of ordinary skill in the art would be able to merely find the combination of Kim et al. and the Kikkawa et al. device to product a portable device and met the claimed invention as claimed as well. Therefore, the 103 rejection would be proper as well and stand as noted above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN
07/05/2009

/Dung T. Nguyen/
Primary Examiner
Art Unit 2871